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Chesley

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[54] MEDICATION CONTAINER

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[52] U.S. Cl. ..... 206/42, 206/56 A, 220/41, 312/295

[51] Int. Cl... B65d 43/12, B65d 83/04, B65d 85/56

[58] Field of Search..... 206/42, 56 A, 56 AA; 220/41; 229/43; 273/153 S; 312/295

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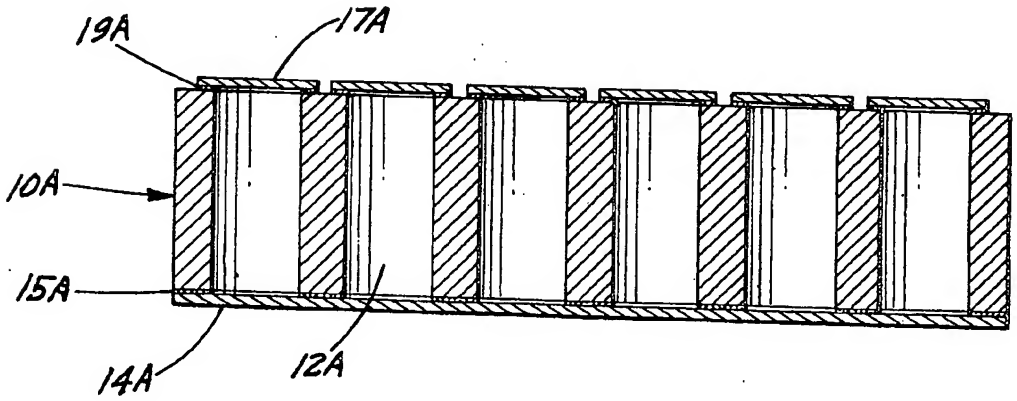
[57] ABSTRACT

A container for solid medication, such as pills, tablets and capsules, to be taken by a patient over a predetermined time span to facilitate taking of the proper medication at the proper time interval. The container is especially adapted for use by a patient who may be taking several different medications at different time intervals. The container is characterized by having a plurality of compartments adapted to contain the medication, a common closure for all of the compartments to facilitate filling of the container by manufacturer, physician, pharmacist, nurse or patient, and an individual closure for each of the compartments to permit access to each compartment sequentially at the proper time intervals. Desirably indicia are provided identifying the compartments by the appropriate time intervals at which the medications are to be taken.

9 Claims, 7 Drawing Figures



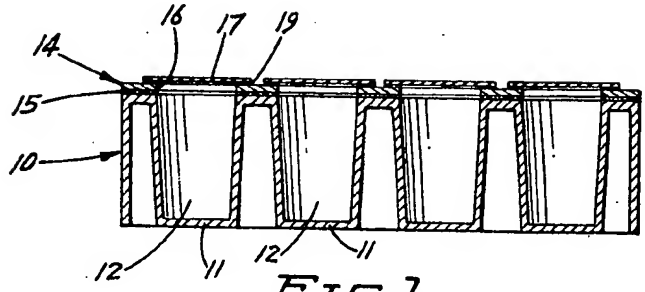


FIG. 1

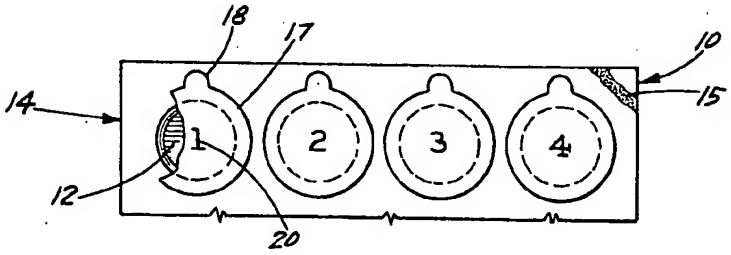


FIG. 2

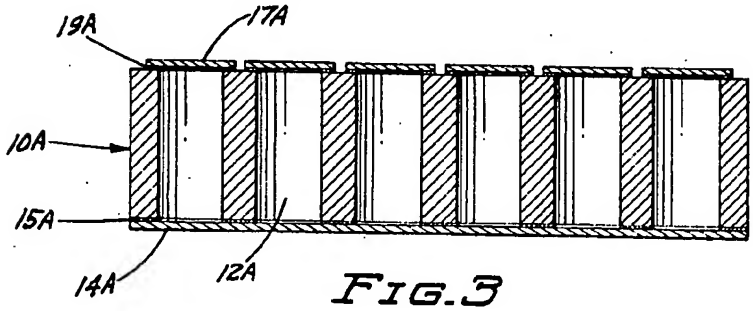


FIG. 3

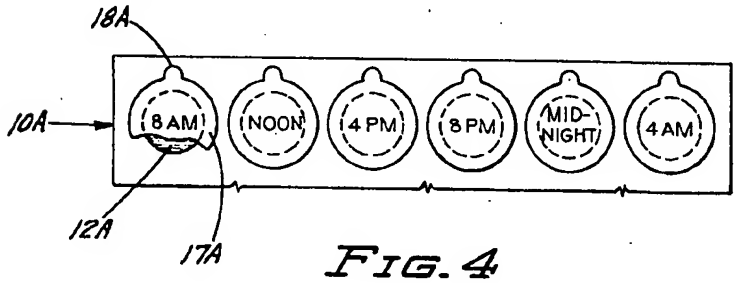


FIG. 4

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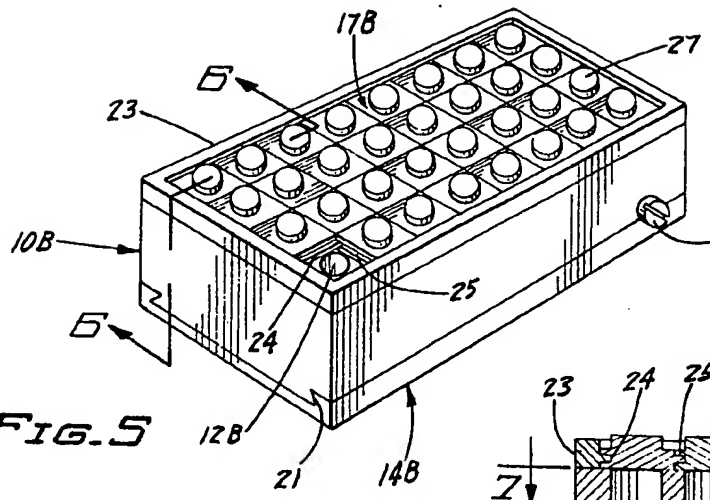

FIG. 5

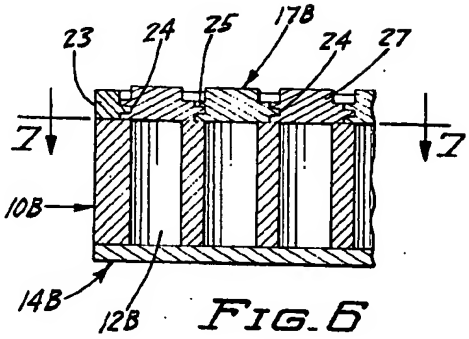

FIG. 6

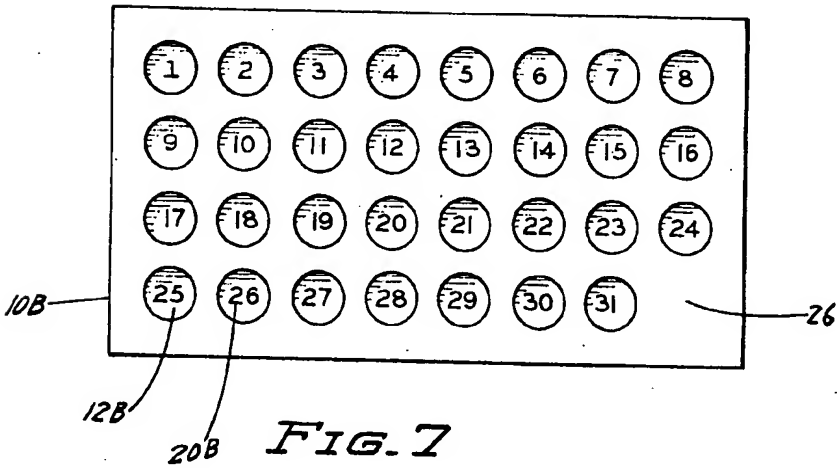

FIG. 7

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MEDICATION CONTAINER

This invention relates to a container for solid medication, whether in the form of tablets or pills or capsules, or the like, prescribed to be taken by a patient at predetermined time intervals, such as every four hours, every eight hours, once a day, every other day, etc. More particularly the container is intended for use by patients taking several different medications, especially if the medications are to be taken at different time intervals. A patient may visit his physician and be given a supply of pills and told: "Take two of these red pills now and four a day for three days. Take one of these yellow pills now and take two a day for three days. If you don't feel better at end of that time, call me again." The average person has difficulty keeping track of even such a simple course of medication, wondering whether he took the correct pill at the correct time. Even a person on a simpler course of medication, for example, one tablet a day for control of high blood pressure, often is in doubt as to whether he has taken the medication for that particular day. As the complexity of the course of medication increases, the difficulties and doubts of the patient multiply.

The container of the present invention is intended to alleviate the problem of faulty memory by providing separate storage compartments for the medications to be taken at differing time intervals, each compartment being identified as to the proper time. The compartments are provided with a common closure to facilitate stocking of the compartments with the proper medications at the proper time intervals. Then, each compartment is provided with individual closure means so that no storage compartment need be opened until the proper time for taking the medications stored therein. In the case of a standard prescribed course of medication for a particular condition, the containers may be prefilled at the factory by the manufacturer. For nonstandard courses of medication, the container may be filled by the physician or pharmacist. For routine courses of medication administered over long periods of time, the patient himself may prefill the container according to the prescribed schedule.

The invention is illustrated in the accompanying drawings in which corresponding parts are identified by the same numerals and in which:

FIG. 1 is an elevation, in section, showing one form of medication container according to the present invention;

FIG. 2 is a fragmentary top plan view of the container of FIG. 1;

FIG. 3 is an elevation, in section, showing a modified form of medication container;

FIG. 4 is a fragmentary top plan view of the container of FIG. 3;

FIG. 5 is a perspective view of a further modified form of medication container according to the present invention;

FIG. 6 is a fragmentary elevation, in section, taken on the line 6—6 of FIG. 5 and in the direction of the arrows; and

FIG. 7 is a horizontal section taken on the line 7—7 of FIG. 6 and in the direction of the arrows.

Referring to the drawings and particularly to FIGS. 1 and 2, there is shown a relatively simple form of medication container according to thepresent invention comprising a body 10 having a plurality of cup-shaped members 11 formed therein, each cup-shaped member defining a medication storage compartment 12. The body 10 including cup-shaped members 11 may be formed by stamping, as from aluminum foil; by vacuum forming from suitable thermo-plastic resinous sheet material; by injection molding from suitable thermoplastic or thermo-setting synthetic resins, preferably transparent; by forming from relatively impervious paper; and the like.

Each compartment 12 is desirably of a size to contain a plurality of pills, tablets or capsules. Each body contains a plurality of compartments corresponding to the predetermined time span of the prescribed course of medication, or some multiple or fraction thereof. For example, for drugs to be taken during daytime hours only on a four hour schedule, as at 8 A.M., noon, 4 P.M. and 8 P.M., four compartments contain the medication for one day and a body of twelve compartments contains the medication for a prescribed medication course of three days.

All of the compartments are covered by a common closure 14 of a size to overlie all of the compartments of the body. This permits the pharmacist or other person who is initially filling the medication container to have access to all compartments for filling purposes. Then, all compartments are closed at once by covering with the common closure, as by means of a layer of pressure-sensitive adhesive 15 applied either to the underside of the closure 14 or to the top surface of body 10 in the areas between the tops of the compartments 12.

As shown in FIGS. 1 and 2, the closure 14 contains a plurality of openings 16 corresponding in number to the number of compartments 12 in the body 10 and in size approximating the top openings of the compartments. Closure 14 may be formed from appropriate rigid or semi-rigid sheet material such as paperboard, cardboard, resinous plastic sheeting, etc. An individual closure 17 overlies each opening 16. In the form illustrated, each individual closure 17 is provided with a pull tab 18 to facilitate removal and is held in place as by means of a layer of pressure-sensitive adhesive 19. The individual closures 17 may be formed from semi-rigid or flexible sheet material such as metal foil, paper, resinous plastic sheet material, etc. Alternatively, the individual closures 17 may be formed integral with the common closure 14, being made easily rupturable and removable as by means of perforations, score lines, or the like.

Access to each compartment 12 is gained independently by removal of one of the individual closures 17 at the appropriate time. In order to facilitate administration of the medication at the appropriate time, suitable indicia 20 are preferably provided identifying the appropriate time interval as by hour of the day or night, day of the week, day of the month, first dose, second dose, first day, second day, etc., or combinations thereof.

Referring now to FIGS. 3 and 4, there is shown a modified form of medication container comprising a body indicated generally at 10A incorporating a plurality of medication storage compartments 12A. Each compartment 12A is open at both ends. The bottom ends of compartments 12A are closed by a common closure 14A secured as by means of a layer of pressure-sensitive adhesive 15A. The opposite top ends of compartments 12A are independently and individually

closed as by means of closures 17A, desirably provided with tabs 18A for easy removal and secured as by means of a layer of pressure-sensitive adhesive 19A.

The container according to this modification is initially assembled with all of the individual closures 17A in place. The container is then filled from the bottom by placing the appropriate medication in each compartment and then closed by affixing common closure 14A over the bottom of the body 10A. Desirably suitable indicia are provided to identify the time for administration of the medication in each compartment. Preferably this indicia is applied to the outer surface of each individual closure 17A for the convenience of the patient, and also on the inner surface of each closure 17A for the convenience of the person filling the container. As shown, the form of container illustrated is adapted for containing medication to be administered every four hours around the clock. If, for example, the 4 A.M. dose is to be omitted in order to permit an uninterrupted sleep span, the compartment for that time is simply not filled.

The forms of medication container heretofore illustrated and described are intended to be disposable, that is used once and then discarded. Each individual closure is discarded after its particular compartment is opened. The empty compartment serves as a reminder that the medication for that particular time interval has been administered. The containers may be made easily and inexpensively from readily available materials. The compartments may be hermetically sealed to preserve the quality and integrity of the medications stored against deterioration due to exposure to the atmosphere.

In FIGS. 5 through 7 there is shown a more permanent form of medication container, intended primarily for patients on long-term courses of medication. The body 10B is provided with a plurality of compartments 12B open at both ends. As shown, there are 31 compartments, the unit illustrated being intended for containing an entire month's medication. The pills, tablets or capsules for each day of the month are contained in each compartment. A common closure 14 comprises the base of the container and permits access to all compartments at once for filling. A sliding dovetail joint 21 permits easy opening and easy positive closing of the container. A set screw 22 insures against accidental opening of the common closure.

An individual top closure 17B is provided for each compartment 12B. Each individual closure 17B is rectangular. Two adjacent outside edges of the closures are provided with a projecting tongue 24. The other two adjacent outside edges of closure 17B are provided with a complementary mating groove 25. The individual closures 17B are enclosed within a rectangular frame 23 at the top of body 10B. Two adjacent sides of frame 23 are provided with a projecting tongue 24. The other two adjacent inside edges of frame 23 are provided with a complementary groove 25. The tongues 24 of the individual closures 17B are engageable with the grooves 25 of each other and of frame 23 and the grooves of closures 17B are engageable with the tongues of each other and with the tongues 24 of frame 23.

As seen in FIG. 7, there is one area 26 of body 10B which is blank, that is, it does not house a compartment 12B. The space overlying this blank area 26 likewise is not provided with a closure 17B, but provides space permitting movement of adjacent closures to permit access, one at a time, to the compartments. For example, looking at FIG. 7, if it is assumed that an individual closure 17B overlies each of the compartments 1 through 31 and the space overlying blank area 26 is empty, then ready access to compartment number 1 may be achieved by moving the closure overlying compartment 24 into the empty space, that overlying compartment 16 over compartment 24, and that overlying compartment 8 over compartment 16. Then the closure overlying compartment 7 is moved over compartment 8, that overlying compartment 6 over compartment 7, etc., until compartment 1 is exposed and emptied of its contents. Then, each succeeding day, access to the next adjacent compartment is achieved by simply moving the closure overlying that day's compartment to the immediately adjacent empty compartment of the previous day.

Because all of the closures 17B are freely slidable relative to each of the others within the frame 23, and no fixed sequential arrangement of individual closures is possible, the identifying indicia for each compartment is desirably provided on the bottom surface of each compartment 12B formed by the common closure 14B. To facilitate movement of the individual closures 17B, a finger-engaging button 27 is desirably provided on the top surface of each closure member.

It is apparent that many modifications and variations of this invention as hereinbefore set forth may be made without departing from the spirit and scope thereof. The specific embodiments described are given by way of example only and the invention is limited only by the terms of the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A medication container comprising:
   - A. a plurality of medication storage compartments corresponding in number of units of a predetermined time period,
   - B. a common closure for all of said compartments permitting simultaneous access to all of said compartments for filling and simultaneous closure thereof, said common closure comprising a piece of sheet material of a size capable of covering all of said compartments,
   - C. means for affixing said common closure over the compartments,
   - D. an individual closure for each of said compartments permitting independent sequential access to each compartment, and
   - E. indicia identifying said compartments with the units of the predetermined time period.

2. A medication container according to claim 1 further characterized in that:
   - A. said compartments are initially open at both ends, said open ends lying in a pair of parallel planes,
   - B. said common closure is at one end of said compartments, and
   - C. said individual closures are at the opposite ends of said compartments.

3. A medication container according to claim 1 further characterized in that:
   - A. said individual closures comprise a plurality of pieces of sheet material, each of a size capable of covering one of said compartments, and

B. means are provided to detachably affix one of said individual closures over each of said compartments.

4. A medication container according to claim 1 further characterized in that:

A. said common closure is provided with an opening overlying each of said compartments,

B. said individual closures comprise a plurality of pieces of sheet material, each of a size capable of covering one of said openings overlying said compartments, and

C. means are provided to detachably affix one of said individual closures over each of said openings in the common closure.

5. A medication container according to claim 2 further characterized in that:

A. said common closure

B. is affixed over the compartments at one end thereof,

B. said individual closures comprise a plurality of pieces of sheet material, each of a size capable of covering one of said compartments, and

C. means are provided to detachably affix one of said individual closures over each of said compartments at the opposite end thereof.

6. A medication container according to claim 2 further characterized in that:

A. said compartments extend through a solid body,

B. said common closure comprises a plate which slidably engages the bottom of said solid body in a dovetail joint, and

C. a set screw extends through said body to engage said common closure to secure the same against movement.

7. A medication container according to claim 2 further characterized in that:

A. said rectangular compartments extend through a solid body,

B. said individual closures comprise a plurality of slidably movable rectangular members, each of a size capable of covering one of said compartments, and

C. said body includes top frame means slidably engaging and guiding at least some of said movable members.

8. A medication container according to claim 7 further characterized in that:

A. two adjacent inside edges of said top frame means are provided with a projecting tongue and the other two adjacent inside edges of said frame are provided with a complementary longitudinal groove, and

B. two adjacent outside edges of each of said closure members are provided with a projecting tongue capable of engaging the grooves of said frame and the other two adjacent outside edges of said closure members are provided with longitudinal grooves capable of engaging the tongues of said frame.

9. A medication container according to claim 8 further characterized in that:

A. all of the space within the edges of said top frame means apart from a space approximately equal in area to one of said slidable closures is occupied by said plurality of closures, and

B. said identifying indicia are applied on the inside surface of said common closure for said compartments, said indicia underlying the compartments and visible therethrough when the compartment is open.

* * * * *

Disclaimer

3,738,480.—*Frank C. Chesley*, Red Wing, Minn. MEDICATION CONTAINER. Patent dated June 12, 1973. Disclaimer filed Nov. 9, 1973, by the inventor.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

[*Official Gazette February 5, 1974*]